IN THE CLAIMS:

Please amend the claims as follows.

Claims 1-6 (Canceled).

Claim 7 (Currently Amended): A quantum cascade laser having a unipolar laser device structure, comprising:

a semiconductor substrate formed of GaAs; and

an active layer, disposed on said semiconductor substrate and having a plurality of quantum well light emitting layers, each having a quantum well structure including a quantum well layer and quantum barrier layer and generating light by means of intersubband transitions in the quantum well structure, and a plurality of injection layers, respectively disposed between the plurality of quantum well light emitting layers and forming a cascade structure along with said quantum well light emitting layers; and

wherein said quantum well light emitting layers and said injection layers of said active layer are formed to contain group III-V compound semiconductors, each containing, as the group V elements, N and at least one element selected from the group consisting of As, P, and Sb; and

wherein, in said active layer, electrons move successively in a cascading manner among said quantum well light emitting layers, and light is generated in the process of the intersubband transition at each light emitting layer; and

wherein the active layer is disposed directly on the substrate.

Claim 8 (Original): The quantum cascade laser according to Claim 7, wherein the composition ratio of N in said group III-V compound semiconductor is no less than 0.1% and no more than 40%.

Claim 9 (Currently Amended): The quantum cascade laser according to Claim 7, further comprising a semiconductor layer formed adjacent said active layer, disposed ~~at least either between said semiconductor substrate and said active layer or~~ at the side of said active layer opposite the semiconductor substrate side and formed of a group III-V compound semiconductor[[,]] ~~containing, as the group V elements, N and at least one element selected from the group consisting of As, P, and Sb~~.

Claim 10 (Canceled).